Washington 9th August 1860

James C Booth Esq

Phila

Dear Sir

I wrote to you yesterday under cover to my son [illegible] and not knowing whether you would remain at [illegible] long enough to receive another letter from [illegible] I address this to Phila. — Your application for a Patent for refining Gold and the Specimen of refined Gold were deposited by me yesterday in the Patent Office. Since then I have been reading over the copy of the Specifications which we prepared, and looking into the subject in some of the Books, and I make the following surmises so that you may study them out to see what any objections if any should come from the Patent Office, which however I do not anticipate.

First. Your claim the use of Common Salt and nitrate of Potassa in connexion with Sulphuric acid.

Upon enquiry of a Jeweller yesterday as to his mode of refining Gold, he told me that for economy he employed Common Salt, Salt Petre and nitric acid.

Your Second claim seems in principle to be a repetition of the first as you use muriatic acid with nitric acid, or nitric acid and common salt, which latter is like the Jewellers plan, and is in effect the same as if nitro muriatic acid were the agent.

Is the 3d claim new? that of precipitating the metallic Gold from its solution, reducing the chlorides to their metallic state, and then dissolving the metals from the Gold. It seems to me that the old process was to precipitate the Gold by the addition of sulphate of Iron; then the Silver by nitric acid, and after the excess of acid was evaporated, the precipitate was was dissolved in water — filtered, reduced by fusing it with soda and the extraneous matter carried off with the muriate of Soda.

The 6th claim is for dissolving alloys of Gold by blowing Steam directly into the solvent liquids.

Does not this interfere with the plan of Accum 2 Vol p 19 as to the effect and assistance of heat on nitric acid — in its action upon dissolving Gold; and also upon the experiments of Mrs Fulhame in her Essay upon Combustion "that the presence of moisture is absolutely necessary for the reduction of Gold"

In your application of steam directly upon the solvent, you furnish heat and moisture, both of which it appears were employed before.

As I take a good deal of interest in this invention and believe it to be very valuable if it is entirely new; I draw your attention to these points so that you may examine them if they are only supposed objections, or in the event of any questions arising from the Patent Office give such explanations as to show that your plan of applying either of these qualities, heat or moisture if they are considered as known methods, is altogether novel, and that the use of the salt and nitrate of potassa by others was in a different combination than that proposed by you.

I do not apprehend any difficulty from the Patent Office, but the interest of others with whom your application may conflict will cause all the opposition that can be raised, and hence in order that you may be prepared I now forewarn you.

I think you had better not let any one know your process —; you might show the process in order to convince persons of its certainty, I mean show the results, but not the modus operandi, and defer any specification of the plan until the Patent is issued.

with respect
Your Ob Sert
Henry M Morfit

Please to examine at the Institute & let me know if Asphaltum or Petroleum has been used as an illuminating Gas.

9th Aug. 1850
H. M. Morfit
Wash. D.C.

WASHINGTON D.C.
AUG
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James C Booth Esq
Chemist
Philadelphia